



March 6, 2012

Larry Gaugler
Acting Team Leader NPDES Team
US Environmental Protection Agency
Region 2, DECA-WCB-CS
20th floor, 290 Broadway, NY, NY 10007

Regarding: Compliance Evaluation Inspection, Essroc San Juan Cement
Site visit: October 22, 2010
Inspector: Murray Lantner, PE Environmental Engineer USEPA Region 2

Dear Mr. Gaugler:

On February 7, 2012, Essroc representatives, Beatriz Rivera, Gary Molchan, Francis Torres, and David Constant, participated in a conference call with Murray Lantner and Eduardo Gonzalez in follow up to our August 1, 2011, letter to you. As you will recall our letter was a response to the October 22, 2010, Compliance Evaluation Inspection Report provided by Murray Lantner and forwarded by you on June 15, 2011. As a result of the February 7, 2012, call we are offering additional information. This information is presented as a revision of the August 1, 2011, letter to you.

On June 21, 2011, Essroc San Juan, Inc. ("Essroc") received a NPDES Compliance Evaluation Report, requesting a written response on certain comments raised by the agency. Essroc hereby presents the following comments addressing the various topics included in the June 15, 2011, letter. The sections written in black bold letters correspond to your comments, some of which have been abbreviated to conserve space. Essroc answers or comments are included in regular non-bold letters.

II. Individual Permit (PR0001163)

A. Non Compliance Items (Individual Permit)

1. It appeared from the inspection that the Lagoon Enhancement System was not installed in accordance with the specifications...
 - a. Drawing C-01 dated 12/26/07 and attached in Appendix A of the CD contain 2 designs for the Gabion Installation Detail. Each of the Gabion design drawing specified that the banks of the channel at each gabion was either to be stabilized with rocks/gabions to prevent or reduce erosion of the banks at the gabion sections, or each gabion was to be keyed into the channel bank. Essroc placed Gabion sections in the channel but had not stabilized the banks of the channel. There were several instances where the gabion was not keyed into the bank. Additionally all Gabions in the channel, in accordance with Appendix A, were to be 6' wide, but, as shown in the photographs, it appears that some Gabions are less than the required 6 foot width.

The installation of the gabions followed the design parameters for the Gabion Installation Detail. As such, gabions were keyed into the banks of the channel. Upon installation, the top corner portion on some of the gabions were they connected to the banks developed some small gaps allowing some of the stormwaters to bypass the gabion filtering system, particularly in areas where the slope of the bank was steeper. To correct this, the gaps were filled with stones. This action was performed to correct

the situation and evaluate its operation because it was unforeseen in the installation of the gabions that such a condition would occur particularly after the significant rainfall events that were experienced during the year 2010 immediately upon the installation of the gabions. These improvements were implemented in November 24, 2010 and reported to EPA in the Quarterly Report dated January 24, 2011. This BMP action was taken to adjust the original gabion design to the prevalent conditions at the stormwater drain channels after the significant rain events that were experienced during 2010. As such it should not be considered as a deviation from the gabion installation detail, but as a BMP improvement to address individual site conditions. Further evaluation of the operation of the system is and will be ongoing in order to ascertain its effectiveness.

Essroc promptly took measures to repair the gaps. While these measures were not anticipated when the original design was made, these actions should not alter the objectives of the design but improve the suspended solid retention system. Essroc will inform of any future up-grades or modifications needed to maintain the effectiveness of the system in the Quarterly Reports. It is important to mention that the Lagoon Enhancement System is also BMP, and a BMP can up-graded as needed to maintain its proper operation.

Plain observation makes it difficult to determine the real dimensions of the gabions. The gabions that installed followed the designed dimensions of 6 ft x 3 ft x 3 ft (2mx1mx1m). Enclosed in Appendix 1 are copies of the invoice for the purchase of the gabions and the specifications for these. This information serves as evidence of the dimensions of the gabions that were installed.

- b. **"Vegetation was to be planted in the channel between each of the gabions"...**
"Include the status of the vegetation between each gabion, along with maintenance needs".

Essroc planted vegetation between the gabions and completed this task on September 15, 2011. The original planted vegetation(Bermuda Grass) rot as a consequence of the constant humidity and lack of sufficient sunlight. Substitute vegetation was planted using similar vegetation naturally growing in the area, in an effort to maximize the sediment retention properties of the vegetation in the drainage channels. Also, the area was added to the BMP plan and is regularly inspected and maintained since the area was revegetated.

- 2. **Essroc failed to properly operate and maintain the facility that discharges to Outfall 001 as specified below.**

- a. **"Water was seen flowing through the pipe and the butterfly valve."**
Butterfly valve from Retention Pond No. 1 was cleaned and closed after the inspection. This task was performed and completed by October 29, 2010. However, please be advised that as a result of the extraordinary and record breaking rain events experienced during 2010, the BMP decision was made to keep the valve partially opened in order to allow sufficient storage capacity during the significant rain events. As a BMP measure, this procedure was implemented in order to address the needed adjustments to accommodate the significant rain events and avoid deterioration of the retention ponds system due to overflows.
- b. **"The channel... was not properly maintained. There are sizable gaps between the gabions and the channel walls. While Essroc took some measures to repair the gaps, the rocks... are not part of the approved...design which specifies that the gabions will be keyed directly into the bank."**

Please refer to our reply on section 1.a above.

During the year 2010 the San Juan area, as reported by the NOAA (see information enclosed in Appendix 2), and other parts of the island received record amounts of rain. This condition affected the performance of adequate maintenance activities at the drainage channel prior to EPA's inspection. However, the drainage channel is subject to periodic inspections and maintenance in order to ascertain its effectiveness as a suspended solids retention mechanism.

- c. **"Coal is stored outside the coal storage building... Essroc must conduct maintenance on its coal pile Best Management Practices (BMPs), such as preventing storm water flow around the Jersey Barriers. Essroc should also work to store all coal inside the coal storage building to reduce stormwater pollution.**

Essroc must improve its BMPs in the coal pile storage area and revise its BMP Plan in accordance with Special Conditions 14 of the individual permit to control stormwater pollution from the coal bulk storage area. A copy of the revised BMP Plan shall be submitted to EPA along with Essroc's response to this report."

Coal is essential for the operations of the manufacturing plant. The coal storage building has enough capacity for 35,000 tons. When the facility is near its limit, due to fluctuations and delivery time, an additional 35,000 tons of coal are purchased. This action helps to ensure that there are adequate amounts of coal at the facility to support its energy requirements. Upon delivery, there is usually some coal left from the previous shipment and, thus, some coal is placed in an adjacent area with no roof. This portion that is outside the roofed area is the first to be used, thus minimizing its exposure time.

The Coal storage area that is left in the open is generally located next to a nearly vertical wall which minimizes the run-on that enters the pile. The runoff from the area is directed to an earth berm to direct flow to control measures which include hay bales and jersey barriers placed to control the flow and helps to depose any eroded material.

Essroc modified its BMPs accordingly, increased the frequency of inspection in this area, revised the conditions of the control measures and takes corrective action when necessary. Hay bales are replaced when appropriate and jersey barriers are repositioned as needed. These control systems are inspected on a weekly basis and replaced as required in order to maintain the system functioning properly.

The revised BMP plan is included in Appendix 3; the revisions are highlighted in yellow.

3. For the period November 2010 to February 2011, the discharge from Essroc's Outfall 001 violated certain tabulated effluent limitations.

The likely cause of the reported exceedances has not been associated to a specific cause. In which case we focused our effort to up-graded, maintain and improve the frequency of the inspections to the existing BMP. The following lists are the actions made to control and maintain the quality of the discharge point:

- a. Removed sediments materials from the stormwaters channels.
- b. Removed sediments materials from the pond #1.

- c. Increase the inspection frequency of the stormwaters system to anticipate when the settlings ponds are reducing their ability and capacity to retain and properly manage sediments due to the accumulation of solids material in the bottom.
- d. Active Maintenance to Coal Pile protection mechanisms is made on a monthly basis.
- e. We evaluated the products used to maintain the green areas and instructed the personnel to provided their evaluation before their use in the facility.
- f. We are using bio-degradable and surfactants that do not contain anionic and can react to MBAS.

In addition, please be advised that Essroc installed and operated a continuous flow meter pursuant to the requirements of the Consent Decree. The equipment was installed but the flow recording device was not properly adjusted to provide accurate information in the weekly flow charts. The equipment was thus recording bad inaccurate data. The fact that the DMR forms that were used did not include a space for reporting the flow information, caused inadvertence of the problem with the inaccurate charts. Upon becoming aware of this matter, Essroc changed the equipment inspection procedures and conducts inspections of the continuous flow instrument on a daily basis.

4. Essroc failed to conduct and/or report the enhanced monitoring results as required by paragraph 14 of the CD as described in Table 2 below.

This issue pertains to an involuntary problem which resulted from the coordination glitch with the contract laboratory used for the sampling and analysis of the stormwaters. Results arrived at the facility on a regular ordinary fashion (approximately 1/month) and thus prevented the company from making the proper adjustments to immediately increase the sampling frequency. The original problem was that instructions were not clearly given to the laboratory to automatically increase the sampling frequency, even without an instruction or direction by the company, upon a finding of an exceedance irrespective its significance. Once the company became aware of the situation, it gave clear instructions to the contract laboratory to increase the frequency of the sampling activities. This was corrected in February 2011 prior to EPA's inspection.

5. Essroc has failed to conduct and/or report weekly monitoring for sulfated and surfactants for period of December 2010 to February 2011.

Answer for Point 3, 4 and 5:

As an involuntary error the specific instruction to the laboratory to automatically increase the sampling frequency upon a finding of an exceedance was not clearly made. This situation occurred during the Environmental Engineer's maternity leave(23 January 2011 though 4 April 2011). Once we noticed the situation clear instruction were given to the laboratory of automatically increasing the monitoring frequency if exceedances occur.

6. Review of the November 2010... DMRs indicated that Essroc Failed to monitor for Settleable Solids.

We always monitor this parameter by a visual inspection assuring that no solids from stormwater cause deposition in, or be deleterious to existing or designated uses of the waters. We instructed our laboratory to establish another method that can be used to report this parameter and will be included in the DMR.

B. Areas of Concern (Individual Permit)

1. The lagoon Enhancement System was not installed in accordance with the specifications...

- a. **The banks if the channel were not vegetated or stabilized. Essroc should take measures to stabilize the channel banks to reduce erosion of the banks.**

Essroc took the necessary measures to stabilize the channel banks and reduce erosion. Natural vegetation was allowed to grow in the area.

- b. Portions of the channel, between the gabions, had a large buildup of sediment indicating that these areas were in need of cleaning and maintenance.

Frequent rain events occurring in 2010 prevented more proper and more frequent maintenance activities. However, the maintenance schedule has been revised to ensure the proper operation of the system.

2. There is a used oil storage area with secondary containment. The area is said to be operated by a contractor. Part 1.12 of the BMP Plan stated that stormwater in the synthetic fuel storage area will be transported back to the Safety Kleen facility. Essroc's revised BMP Plan shall include SOPs for its secondary containment structures. Essroc's revised BMP Plan shall include SOPs for its secondary containment structures.

This area is indeed operated by a contractor (Alternative Fuels Inc.) and the contractor has developed an Operation Plan for its facility. This plan, which has been revised by the Essroc administration, includes the procedures for draining the containment area. A copy of this plan is provided in Appendix 4 for review.

3. The POS was to be submitted in August 2010 and initiation of implementation of the POS to begin in January 2011. Please summarize the current status of the POS implementation and Compliance Schedule.

The POS was submitted to the EQB on July 30, 2010. Subsequently, a schedule for document delivery was approved. The table below provides the status of the implementation of the plan.

Task	Completion date	Delivered date
1. Study feasibility of discharging sanitary water to PRASA	June 15, 2011	June 15, 2011
2. Analysis of Previous Studies	July 15, 2011	July 15, 2011
3. Field Investigation	August 5, 2011	
4. Preparation for approval of a Quality Assurance Project Plan	December 31, 2011	
5. Development and execution of a Sampling Plan	February 6, 2012	

4. EPA requested record on the 2 previous flow meter calibrations along with the flow meter continuous recording charts for August and September 2010 and the log book for material removed from the settling ponds as required by special condition 11 of the permit. The EPA inspector has not received this information.

A copy of meter calibrations along with the flow meter continuous recording charts for August and September 2010 and the log book for material removed from the settling pond is provided in Appendix 5 for review.

5. Heavy equipment and waste materials are stored on-site in and near the Quarry Heavy Equipment Area. The dumpsters and waste materials should be kept covered to prevent stormwater contamination. The waste material and dumpster area do not appear to be addressed in the December 2004 BMP Plan, and should be addressed in the BMP Plan.

The dumpsters and waste material have been covered and this area has been included in the BMP plan which has been modified and is included in Appendix 3.

II. Stormwater Permit (MSGP 2008)

A. Non Compliance Items (MSGP 2008)

1. The following indicates a failure to maintain BMPs in the quarry area No. 5 that drains to SW Outfall No. 2 (DP-002):

- a. **In Quarry Area No. 5, which drains to Stormwater Outfall No. 2, there are unstabilized parts of the quarry that serve as stormwater drainage paths. These areas must be stabilized and maintained in accordance with the permit.**

This area is part of the active Quarry, as such the drains have been stabilized. Rock berms have been placed in the stormwater drainage paths to help reduce the flow velocity.

- b. **Some of the rock berms in Quarry Area No. 5, such as those in photographs were not being properly maintained and stormwater could flow around them and bypass the rock berm.**

Additional maintenance is been furnished and applied to the rock berms and the frequent inspections ensures their adequate operation.

- c. **There are unstabilized and non-vegetated portions of the channel that flows from the quarry area to stormwater outfall no. 2. There were also indications that the stormwater channel does overflow onto the surrounding non-vegetated areas.**

Appendix 6 of Essroc's October 2010 and December 2005 SWPPPs indicate that the channel is vegetated. Essroc must provide a more detailed drawing of its Stormwater Outfall No. 1 and No. 2 drainage system and include measures to further stabilize the channels leading to these stormwater outfalls from its quarrying operations. Include design calculations for the stormwater outfalls no. 1 and no. 2 discharge channels and the ponds tributary to stormwater outfall no. 1 and 2 to demonstrate that the BMPs installed conform with the MSGP 2008 and specifically section 8.J.4.1.3 of the MSGP 2008.

The small ponds located near outfall no. 1 and no. 2 are intended to serve as a flow attenuation measure and as temporary sediment retention or sediment detention ponds. As such, thus they conform to section 8.J.4.1.3 of the MSGP.

A new drawing with the stormwater drainage systems is included in Appendix 6.

- d. **There are unstabilized areas near stormwater outfall no. 1. Appendix 6 of the October 2010 and December 2005 SWPPPs does indicate some vegetation in this area.** There is natural vegetation in the area and the area is stabilized. However grass or low laying vegetation in the channels was not present in some areas due to continuous flows of water months prior to the EPA inspection and the lack of direct sunlight due to the tree shades. To prevent confusion, the vegetation was not included in the illustration of the drainage system submitted to EPA in August 2011..

- e. **Essroc constructed an earthen berm in Quarry Area No. 6. However, portions of the earthen berm are no longer in-tact and therefore the berm would no longer be adequate in retaining stormwater. Quarry area No. 6 drains to stormwater outfall no.** The earthen berm was repaired to ensure adequate operation. This action was completed by August 30, 2011 and has been maintained on a regular basis, as needed.

2. **Part 5.1.2 of the MSGP requires that the SWPPP include a site map that contains locations of all existing structural control measures.... The site map failed to include certain structural controls, or inaccurately portrayed certain controls described below:**

A new site map is enclosed in Appendix 6.

3. **Paragraph 14 of the CD requires that precipitation monitoring be conducted on-site on a daily basis. Essroc's April 29, 2011 and January 24, 2011 Quarterly reports contain rainfall records**

for a weather station in San Juan and do not contain any information on precipitation records for the site as required by the SWPPP and the CD.

The instrument that was being used for measuring precipitation at the site was damaged and has been replaced. The replacement took place on September 15, 2011.

In the meantime, other data sites under the USGS / EQB were monitored to obtain accurate rain data information. Two of the data sites are very near the Essroc property and include a Toa Alta station, located approximately 2.4 miles northeast, and a Corozal station, located 3.3 miles southeast of the site. It appears the Corozal station is in good working order and contains precipitation data for the past 120 days. This information may be seen in the following web page:

http://waterdata.usgs.gov/pr/nwis/uv?cb_00045=on&format=html&period=7&site_no=50038320

4. **The 72-hour (3-day) storm interval does not apply if you are able to document that less than a 72-hour interval is representative for local storm events during the sampling period. For each monitoring event, the facility is required to record the date and duration (in hours) of the rainfall event, rainfall total (inches) for that rainfall event, and time (in days) since the previous measurable storm.**

The benchmark monitoring sample collection is normally captured during a visual inspection performed at the outfall. As such, the visual inspection sheet has been modified to include the required information and ensure the person taking the sample revises the information required and the conditions required to take the sample. A copy of the inspection sheet is included in Appendix 7. It should be noted that due to the frequency of rainfall in the area, in some instances the 72 hour interval was not able to be achieved.

Essroc submitted rainfall data for a rain gauge in San Juan, PR, and not an on-site gauge.

See response to comment on 11. A. 3 above.

Essroc monthly benchmark monitoring records for the period October 2010 to March 2011 do not include a record of the duration (in hours) of the rainfall event as required by part 6.1.3 of MSGP 2008.

See comment on 11. A. 4 above.

Based on the rainfall records included with the BMR submittal (San Juan Gauge) it appears that Essroc collected samples in which the preceding measurable storm event was less than 72 hours (3 days) on December 21, 2010 and January 3, 2011. It also appears that benchmark samples were taken on days in which no or little precipitation was recorded (October 2010 and November 2010).

As previously mentioned, year 2010 was one in which record rain fall was registered in San Juan and other parts of the island. In many instances, rainfall periods occurred with less than 72 hours in between. Due to the frequent rains, it is possible that some of the samples were collected in instances in which the preceding measurable storm event was less than 72 hours. The collection of samples was performed because it was considered representative for local storm events.

5. **Review of Essroc's Monthly Stormwater Industrial Routine Inspection Reports for the period October 2010 and March 2010.**
 - a. **Failed to include the time of the inspection**

- b. ... the rock berms in the quarry area, the earthen berm in quarry area no. 6 and the small retention ponds tributary to the stormwater outfalls 1 and 2 do not appear to be part of the routine inspections...

The inspection sheet has been corrected to include all relevant locations and provide for an area to include the time of the inspection. A copy of the inspection sheet is included in Appendix 8.

6. The samples must be collected as soon as practicable after the first 30 minutes and documentation of why it was not possible to collect the sample within the first 30 minutes....discharges must occur at least 72 hours from previous discharge.

The collection of samples at the discharge points requires that a storm event occurs in which there is an actual discharge. Due to the large caption area and the distance to the discharge point, the person that is in charge of taking a sample may take more than 30 minutes to reach the area. Also, in many events during the 2010, rainfall events were frequently occurring within less than the 72 hours required.

Essroc stormwater discharge point 1 and 2 also discharge during dry weather as evidenced during this inspection and other inspections..., therefore it is imperative that Essroc ... monitor an on-site rain gauge.

It should be noted that, due to natural conditions of the karst area, rainwater may take a long time to drain from the caption area, depending on the rain amount and saturation point of the terrain. In many instances, rainfall may have ended 24 or 48 hours prior to an inspection, but the drainage through the discharge point continues. As such, it may appear that there is a discharge during dry weather. This condition should be studied and evaluated for the area.

7. **Endangered Species Act – FWS information... protocols for boa... provide a copy**

Enclosed in Appendix 9 is the protocol for the management the species in the quarry area.

8. **Provide a copy of evidence of correspondence with FWS.**

The information requested is enclosed in Appendix 10.

9. In site Rain gauge Data

Date	Rain (in)	Date	Rain (in)	Date	Rain (in)	Date	Rain (in)
9/15/2011	0.01	10/1/2011	0.01	11/1/2011	0.28	12/1/2011	0.01
9/16/2011	0.01	10/2/2011	0	11/2/2011	0.12	12/2/2011	0
9/17/2011	0.2	10/3/2011	0.02	11/3/2011	0.01	12/3/2011	0
9/18/2011	0.1	10/4/2011	0	11/4/2011	0.04	12/4/2011	0
9/19/2011	0.2	10/5/2011	0.47	11/5/2011	0.02	12/5/2011	0.06
9/20/2011	0.03	10/6/2011	0.01	11/6/2011	0	12/6/2011	0.32
9/21/2011	0.24	10/7/2011	0.12	11/7/2011	0.18	12/7/2011	0.05
9/22/2011	0.33	10/8/2011	0.47	11/8/2011	0	12/8/2011	0.1
9/23/2011	0.01	10/9/2011	0.01	11/9/2011	0.58	12/9/2011	3.73
9/24/2011	0.03	10/10/2011	0	11/10/2011	0	12/10/2011	2.23
9/25/2011	1.16	10/11/2011	0.01	11/11/2011	0	12/11/2011	0.06
9/26/2011	0	10/12/2011	0	11/12/2011	0	12/12/2011	0
9/27/2011	1.28	10/13/2011	0	11/13/2011	0	12/13/2011	0.08
9/28/2011	0.01	10/14/2011	0.01	11/14/2011	0	12/14/2011	0.07
9/29/2011	0.01	10/15/2011	0.01	11/15/2011	0	12/15/2011	0.13
9/30/2011	1.5	10/16/2011	0.27	11/16/2011	0	12/16/2011	0.04
		10/17/2011	0.04	11/17/2011	0	12/17/2011	0.03
		10/18/2011	1.63	11/18/2011	0	12/18/2011	0.02

		10/19/2011	0	11/19/2011	0	12/19/2011	0
		10/20/2011	0.02	11/20/2011	0	12/20/2011	0.11
		10/21/2011	0.12	11/21/2011	0	12/21/2011	0.2
		10/22/2011	0.18	11/22/2011	0	12/22/2011	0.12
		10/23/2011	0.02	11/23/2011	0	12/23/2011	0.04
		10/24/2011	0.02	11/24/2011	0	12/24/2011	0.07
		10/25/2011	0.04	11/25/2011	0	12/25/2011	0.01
		10/26/2011	0.08	11/26/2011	0	12/26/2011	0.02
		10/27/2011	0.01	11/27/2011	0	12/27/2011	0
		10/28/2011	0.2	11/28/2011	0	12/28/2011	0
		10/29/2011	0.57	11/29/2011	0	12/29/2011	0.02
		10/30/2011	1.04	11/30/2011	0.03	12/30/2011	0
		10/31/2011	0.14			12/31/2011	0.06

We appreciate your time, efforts and assistance concerning this important matter for Essroc. Please let us know if you have any questions or need additional information concerning the documents submitted along with this letter.

Cordially,


Beatriz Rivera